



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,876	12/05/2001	James F. Stevens	00041-DV4	5220
38393 7590 02/07/2007 CHEVRON SERVICES COMPANY LAW, INTELLECTUAL PROPERTY GROUP P.O. BOX 4368 HOUSTON, TX 77210-4368			EXAMINER DUONG, THANH P	
			ART UNIT 1764	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			02/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/006,876

Applicant(s)

STEVENS ET AL.

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 16, 2007 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 9, 11-12, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa et al. (6,024,774). Regarding claims 9, 11-12, 16, and 18, Nakagawa discloses an apparatus for selectively reducing carbon monoxide content (Col. 2, lines 45-60 and Col. 4, lines 47-57) of a hydrogen rich gas (Col. 5, lines 10-15), comprising: a catalyst bed containing an oxidation catalyst (Col. 3, lines 8-20); a porous tube (4) positioned substantially within a catalyst bed for distributing raw material gas (carbon monoxide and water vapor) throughout the catalyst bed; and a cooling jacket

(7) for maintaining the reactor operating temperature (Fig. 1); and the porous tube is an alumina tube (Col. 7, lines 60-63).

Instant claims structurally reads on the apparatus of Nakagawa '774.

2. Claims 9, 12, 15, 16, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Clawson et al. (6,641,625). Regarding claims 9, Clawson discloses an apparatus for selectively reducing carbon monoxide content (Col. 14, lines 31- Col. 15, line 7) of a hydrogen rich gas (Col. 14, lines 31-35), comprising: a catalyst bed (95) containing an oxidation catalyst (Col. 15, lines 4-7); a porous tube (92) positioned substantially within a catalyst bed (95) for distributing raw material gas throughout the catalyst bed; and a cooling jacket (97) for maintaining the reactor operating temperature (Fig. 1).

Instant claims structurally reads on the apparatus of Clawson '625.

3. Claims 10, 13-15, 17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (6,024,774). Regarding claims 10 and 17, Nakagawa discloses the porous tube is made of ceramic materials or heat resisting metal (Col. 4, lines 1-5) but is silent with respect to the porous tube is made of stainless steel material. In view of Nakagawa, it would have been obvious matter of design choice to one having ordinary skill in the art to select stainless material as the material of construction for the porous tube to provide a tube with improved heat and corrosion resistance since the selection of a known material based on its suitability for its intended

use supported a *prima facie* obviousness. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Regarding claims 13-14 and 19-20, Nakagawa is silent with respect to temperature claimed range. However, Nakagawa discloses the apparatus is operating at a much higher temperature range (Col. 1, lines 50-57) than the claimed invention; therefore, one of ordinary skill would have expected the apparatus of Nakagawa is capable of operating within the temperature range of the claimed invention. Regarding claims 15 and 21, Nakagawa discloses the use of a cooling circulating pipe 7 with cooling means to control the reaction temperature but is silent with respect to the type of coolant. It would have been obvious in view of Nakagawa to one having ordinary skill in the art to use any conventional coolant means such as water, steam, and other coolants to control the temperature of the reactor to obtain a high purity of hydrogen.

### ***Response to Arguments***

Applicants' arguments filed 1/16/07 have been fully considered but they are not persuasive. (1) Applicants argue *"the object of the Nakagawa invention is to provide a chemical reaction apparatus capable of enhancing the generation rate for the main product gas by removing carbon dioxide as a byproduct gas out of the reaction system (Col. 1, lines 43-46). In contrast, as demonstrated throughout the specification, the present invention is generally directed to an apparatus for selectively reducing carbon monoxide content of a hydrogen rich gas (0011, lines 1-3, 0038, lines 1-5; 0039, lines 1-4)."* Examiner respectfully disagrees. It is submitted that Nakagawa discloses all

Art Unit: 1764

structural features of the claimed invention; therefore, the apparatus of Nakagawa is capable of reducing carbon monoxide content in the gas stream. Note, "An apparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). MPEP 2114. (2) In response to applicant's arguments, the recitation "for selectively reducing the carbon monoxide content of a hydrogen rich gas" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Duong  
January 25, 2007

TD



Glenn Calabrese  
Supervisory Patent Examiner  
Technology Center 1700